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(54) Reusable hard-pack cigarette case.

(57) A limited-life reusable hard pack for encasing a soft pack of cigarettes is disclosed. The reusable hard pack permits easy access to the cigarettes by the feature of a slideable interior wall 20 attached to a pivotable bottom wall which when moved relative to the exterior walls of the hard pack pushes the soft pack upward and beyond the top of the hard pack. An overhang on a top wall 50 extends across and beyond one side wall 25 to prevent the bottom wall from pivoting downward, beyond the bottom plane of the hard pack. The opposite side of the top wall leaves a gap through which cigarettes may be removed without opening the top closure. A tuck portion 60 is pivotably attached to the top wall. When the pack is closed, the tuck poriton lies inside and against the front wall 10 of the pack. One such hard pack is collapsed and inserted into a standard ten-pack carton.

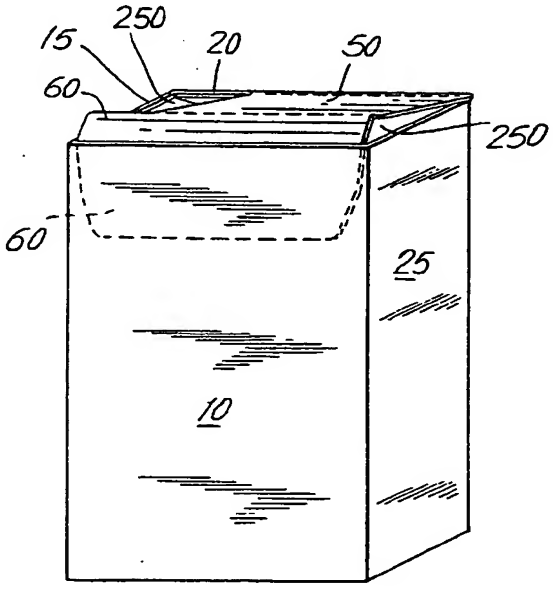

FIG. 7

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Background of the Invention

This invention relates to the field of cigarette packages. More particularly, this invention relates to a limited-life reusable hard-pack cigarette case into which soft-pack cigarette containers may be inserted.

Cigarettes are normally sold in either hard or soft packs of twenty to twenty-five cigarettes. These packs are also sold in ten-pack cartons, and sometimes in five-pack half-cartons. Both hard and soft packs typically cover an inner foil lining, which protects the flavor of the tobacco.

Hard packs have the advantage that they are more sturdy than soft packs, protecting the cigarettes from being crushed when a pack is placed in a consumer's purse, or pocket, rolled up shirt sleeve, or when a heavy object is inadvertently placed on top of the pack, such as on an automobile seat. In addition, hard packs provide easier access to the enclosed cigarettes than soft packs by having recessed front walls adjacent to the top closure.

Hard packs, however, cost more to make than comparable soft packs. In addition, hard packs require more material than soft packs, raising environmental concerns of waste, both in use of resources and in disposing of used packs.

There is a need for a system that couples the advantages of hard packs -- both in product protection and ease of access to the cigarettes -- that costs less and is less wasteful of environmental resources.

According to the invention there is provided a single blank, preferably of paperboard, that is folded along scored or fold lines to form a reusable hard pack having a front wall, a rear wall, two side walls, a bottom wall and a top closure having a top wall and a tuck portion. The top closure is connected to the bottom wall by an interior wall such that when the top closure is pulled upward, away from the bottom wall, the bottom wall is raised in the general direction of the top closure relative to the position of the front, rear and side walls, thereby raising the level of the inner foil or soft pack to enable easy access by the consumer to open the foil or soft pack wrapper.

Preferably, the interior wall is perpendicularly attached to the bottom wall and top wall of the top closure, and is parallel to, abutted against and of the same size and shape as the rear wall. In this embodiment, when the bottom wall is in the raised position, it is pivoted along the edge of the bottom wall that is perpendicularly attached to the front wall, moving the bottom wall out of its perpendicular plane with an angle of less than 90° relative to the front wall. The opposite edge of the bottom wall, which is perpendicularly attached to the interior wall, is moved out of its perpendicular plane with an angle of greater than 90° relative to the interior wall. The sum of the resultant angles between the bottom wall and each of the front wall and interior wall remains 180°.

As the bottom wall is moved out of its perpendicular plane to the front and interior walls, it pushes the encased foil or soft pack upward and beyond the top of the free edges of the front, rear and side walls (adjacent to the top closure). This provides the easy access to the consumer for opening the foil or soft pack wrapping.

The invention can provide a limited-life, reusable hard-pack case-for enclosing foil or soft-pack cigarette containers. One of these reusable packs may be inserted into a standard ten-pack carton along with ten standard soft packs or foil packs. The consumer inserts a foil or soft pack into the reusable pack, then discards the inner foil or soft pack when finished, retaining the reusable pack for a fresh foil or soft pack. The consumer may then discard the reusable case after the last soft pack has been smoked.

The invention can provide a modified top closure having a tuck portion to enable the consumer to readily open the top closure, remove the used foil or soft pack, insert a fresh foil or soft pack, and reclose the top closure.

The invention can provide a top wall that only covers a portion of the top of the encased foil or soft pack so that the consumer may remove individual cigarettes through the opening in the top wall without removing the tuck portion and opening the top closure. This is preferably accomplished by a top wall that spans about two-thirds of the distance across the top of the reusable pack, leaving one-third of the top of the reusable pack open, exposing that area of the inner foil or soft pack.

The invention can provide a means for raising the position of the encased foil of soft pack relative to the top of the reusable case so that the consumer may more easily obtain access to and tear open the exterior wrapping of the encased foil or soft pack.

The invention can provide for an extension of the top wall to prevent the bottom wall from falling downward, in the opposite direction that the bottom wall pivots to provide easy access to the encased cigarettes. This extension of the top wall forms an overhang beyond the plane defined by the adjacent side wall. This feature helps to keep the integrity of the cigarette pack.

The invention can to provide a cigarette carton in which minimal graphics and printing are required on the cigarette packs. This is preferably accomplished by printing the brand logo, name and other graphics onto only one of the cigarette packs resulting both in cost savings and in reducing waste.

Brief Description of the Drawings

The invention will be further described with refer-

ence to the accompanying drawings, in which like reference characters refer to like parts throughout and in which:

FIG. 1 shows a blank for the preferred embodiment of the invention, with the interior surface facing upward;

FIG. 2 shows the first step in forming the blank of FIG. 1 into a reusable hard pack by folding the coplanar bottom wall, interior wall and top closure against the front wall;

FIG. 3 shows the second step in forming the reusable hard pack in which the insert side wall is folded back against the rear wall and to which glue is applied to the exposed surface;

FIG. 4 shows the three layers of the third step in forming the reusable hard pack in which the coplanar rear wall and insert side wall are folded back against the front wall and the insert side wall is secured to the adjacent side wall;

FIG. 5 is a rear perspective view of the flattened reusable hard pack of FIG. 4 in a partially expanded configuration with each of the side walls perpendicular to each of the front and rear walls, but with the bottom wall, interior wall and top closure coplanar;

FIG. 6 is a rear perspective view of the preferred embodiment of the reusable hard pack in its fully expanded configuration with the bottom wall perpendicular to the front, rear and interior walls and into which a foil or soft pack may be inserted;

FIG. 7 is a front perspective view of the formed reusable hard pack of FIG. 6 containing a foil or soft pack, and with the top closure partially closed;

FIG. 8 is a front perspective view of the formed reusable hard pack of FIGS. 6-7 containing a foil or soft pack, and with the top closure completely closed;

FIG. 9 is a side perspective view of the formed reusable hard pack of FIGS. 6-8 showing the various layering and positioning of the walls when the inner foil or soft pack is in the raised and accessible position and the top closure in the open position;

FIG. 10 is a side perspective view of the formed reusable hard pack of FIGS. 6-9 showing the various layering and positioning of the walls when the inner foil or soft pack is in the raised and accessible position and the top closure in the closed position;

FIG. 11 is a front perspective view of the formed reusable hard pack of FIGS. 6-10 with the inner foil or soft pack opened and cigarettes extending upward through the gap in the top wall of the top closure;

FIG. 12 shows a blank for an alternate embodiment of the invention, with the interior surface facing upward; and

FIG. 13 is a front perspective view of the formed reuseable hard pack formed from the blank of FIG. 12.

Detailed Description of the Invention

FIG. 1 shows the blank for forming the preferred embodiment of the invention. The alternating long and short dashed lines are scored fold lines that will be folded into place, and the short dashed lines are perforated scored fold lines designed to be repeatedly pivoted over the limited life of the reusable hard pack without breaking. Panels connected by short dashed lines will be referred to as being pivotably attached to each other; those connected by alternating long and short dashed lines will be referred to as being foldably attached.

The blank is preferably made of paperboard, and is folded upward, out of plane and toward the viewer of FIG. 1, showing the interior surfaces of each of the panels such that when formed into a pack the surfaces will in general not be seen by the consumer.

The blank consists of front wall 10; right side wall 25, which is foldably attached to front wall 10; left side wall 15, which is foldably attached to front wall 10 opposite of and of substantially the same size and shape as right side wall 25; rear wall 30, which is foldably attached to left side wall 15 opposite of and of substantially the same size and shape as front wall 10; insert side wall 5, which is foldably attached to rear wall 30 opposite of and smaller than left side wall 15; bottom wall 40, which is pivotably attached to front wall 10; interior wall 20, which is pivotably attached to bottom wall 40 opposite of and slightly smaller than front wall 10; top wall 50, which is pivotably attached to interior wall 20 opposite of bottom wall 40; and tuck portion 60, which is pivotably attached to top wall 50 opposite of interior wall 20. Top wall 50 and tuck portion 60 will be collectively referred to as the top closure.

For purposes of providing reference only, the various panels are referred to as being front, rear, top, bottom, left side and right side walls. This is based on the perspective of the formed reusable hard pack shown in FIGS. 7-8. However, the actual orientation of the formed reusable hard pack may be any possible orientation. For example, right side wall 25 may be oriented as the bottom of a reusable hard pack that opens from the side.

The first step in forming the blank of FIG. 1 into a reusable hard pack entails folding bottom wall 40 along the pivot line between bottom wall 40 and front wall 10 so that bottom wall 40 rests against front wall 10, as shown in FIG. 2. Once folded, the blank remains in a substantially 2-dimensional configuration, with bottom wall 40, interior wall 20, top wall 50 and tuck portion 60 coplanar.

The second step in forming the reusable hard pack involves folding insert side wall 5 back against

rear wall 30 so that it is parallel and abutted against rear wall 30, as shown in FIG. 3. Glue points 100 are then applied along the exposed surface of insert side wall 5. While FIG. 3 shows glue spots 100 being applied in a line on insert side wall 5, those skilled in the art will appreciate that the glue may instead be applied to right side wall 25, or to both walls. Other securing means known in the art may be employed to secure right side wall 25 to insert side wall 5, such as a pre-applied adhesive or heat-sealed poly coating. Regardless of which securing means is employed, the blank remains in a substantially 2-dimensional configuration.

The third and final step in forming the reusable hard pack is to fold left side wall 15 along the fold line between it and front wall 10 so that it is rests against bottom wall 40 and interior wall 20, as shown in FIG. 4. Rear wall 30 remains coplanar with left side wall 15 during this step, allowing the glue points 100 on insert side wall 5 to come in contact with right side wall 25. In this way, right side wall 25 is secured to insert side wall 5. Note that all fold and pivot lines are mobile, capable of folding or pivoting.

FIG. 4 shows the three layers of the collapsed or substantially two-dimensional configuration of the formed reusable hard pack. The top layer includes rear wall 30 and left side wall 15, which are both coplanar and rectangular in shape.

The middle layer consists of insert side wall 5, interior wall 20 and bottom wall 40. The portion of interior wall 20 remote from bottom wall 40 is seen extending beyond the boundary of the rear wall 30 and left side wall 15, as are top wall 50 and tuck portion 60, which are coplanar with interior wall 20 and bottom wall 40.

There is a gap in this middle layer between insert side wall 5 and interior wall 20 and insert side wall 5. Right side wall 25 is visible in the layer beneath that gap. In addition to right side wall 25, the lower layer also contains front wall 10.

The reusable hard pack as shown in FIG. 4 is preferably left in its substantially two-dimensional configuration and inserted into and on the side of a standard cigarette carton containing ten foil or soft packs. These foil or soft packs may be made from any standard material, such as aluminum foil, paper, or a plastic or metallized wrapping material.

The collapsed reusable hard pack is preferably inserted into a ten-pack carton along a vertical plane to allow the carton to be opened and the enclosed foil or soft packs to be tax-stamped in the conventional manner. The carton is then reclosed and eventually sold to a consumer. Alternately, the reuseable hard pack may be offered separately as a premium along with a carton of soft packs.

In conventional tax-stamping machines, ten cigarette packs are encased in a 2x5-carton so that the top closures of the carton are folded back along the exterior walls of the carton, exposing the bottoms of the cigarette packs. The collapsed reusable hard pack must therefore fit either between or on one of the sides of the two rows of five cigarette packs so as not to obstruct the exposed ends of the cigarette packs during tax stamping.

An example of a standard tax-stamping machine is model FUSON, manufactured by Meyercord, of 365 East North Avenue, Carol Stream, Illinois 60187.

The consumer then transforms the two-dimensional reusable hard pack shown in FIG. 4 into the final formed configuration in two steps. In the first step, the plane defined by rear wall 30 is moved away from the plane defined by interior wall 20 such that rear wall 30 is perpendicular to left side wall 15 and right side wall 25, which are each in turn perpendicular to interior wall 20 and front wall 10, as shown in FIG. 5. Interior wall 20 remains generally coplanar with bottom wall 40 and the top closure, and rests against front wall 10.

The second step entails folding bottom wall 40 into place along its pivot lines so that it is generally perpendicular to front wall 10 and interior wall 20, as shown in FIG. 6. Interior wall 20 then rests against rear wall 30 instead of front wall 10. This is the final three-dimensional configuration of the formed reusable hard pack, which is ready for insertion of a foil or soft pack by the consumer.

After the consumer inserts a foil or soft pack into the reusable hard pack, the top closure may be closed as shown in FIG. 7. Top wall 50 is folded along its pivot line with interior wall 20 toward front wall 10, and tuck portion 60 is simultaneously folded along its pivot line so that its free end is inserted into the reusable hard pack along the interior surface of front wall 10 and between front wall 10 and the encased foil or soft pack.

When the top closure is fully closed, as shown in FIG. 8, insert portion 60 is parallel to and abutted against front wall 10 and the adjacent wall of encased pack. Top wall 50 is perpendicular to front wall 10, interior wall 20, rear wall 30, and insert portion 60, and is parallel to top 250 of the encased pack.

While FIGS. 7-8 show the level of top 250 of the encased pack set slightly below the top of the reusable hard pack, the level may be flush with the top of interior wall 20 and left side wall 15 so that when the top closure is in the completely closed position, as shown in FIG. 8, top wall 50 rests against top 250 of the encased pack.

To facilitate ease of opening the encased foil or soft pack, the level of the encased pack may be raised relative to the reusable hard pack. This may be done, as shown in FIG. 9, by opening the top closure and pulling it in the direction opposite of bottom wall 40, thereby sliding interior wall 20 along rear wall 30 in the direction toward the top closure. This movement moves bottom wall 40 out of its perpendicular

plane relative to front wall 10, interior wall 20 and rear wall 30. In particular, the angle along the pivot line between bottom wall 40 and front wall 10 becomes less than 90°, and the angle along the pivot line between bottom wall 40 and interior wall 20 becomes greater than 90°. Note that the sum of the these two angles remains 180° as long as interior wall 20 is parallel to rear wall 30.

As interior wall 20 slides upward along rear wall 30, rear 230 of the encased pack similar moves upward along with interior wall 20, creating a gap between bottom 240 of the encased pack and the portion of bottom wall 40 near front wall 10. Bottom 240 of the encased pack rests along the portion of bottom 40 near interior wall 20.

This raises top 250 of the encased pack beyond the plane defined by the adjacent free edges of front wall 10, rear wall 30, left side wall 15 and right side wall 25, exposing a portion of left side 215, front 210 and rear 230 of the encased pack. This allows the consumer to more easily tear open the wrapping of the encased pack and remove an enclosed cigarette.

Interior wall 20 moves away from rear wall 30 as interior wall 20 is moved toward the raised position. Interior wall 20 either remains parallel to rear wall 30, in which case there is a gap between it and rear wall 30, or is angled relative to rear wall 30 such that there is a gap between the portions of interior wall 20 and rear wall 30 adjacent to bottom wall 10, and the portions of interior wall 20 and rear wall 30 adjacent to top wall 50 are touching each other.

Similarly, the consumer may attain the same raised position by pushing bottom wall 40 upward, in the direction toward the top closure. This may be done with the top closure in the closed position, as shown in FIG. 10. Top wall 50 remains perpendicular to interior wall 20 and tuck portion 60, which remains between the exterior surface of front 210 of the encased pack and the interior surface of front wall 10.

While interior wall 20 may slide upward relative to rear wall 30, the lip or overhang of top wall 50 prevents interior wall 20 from sliding downward such that bottom wall 40 extends beyond the plane defined by the adjacent free edges of front wall 10, left side wall 15, right side wall 25 and rear wall 30. The lip or overhang of top wall 50, as shown in FIGS. 8 and 11, extend over the adjacent free edge of right side wall 25. This lip or overhang is preferably about 1.6mm (1/16th of an inch) (plus or minus 0.8mm (1/32nd of an inch).

Another feature that facilitates easy access to and removal of cigarettes is the gap in top wall 50 adjacent to left side wall 15, as shown in FIG. 11. This feature permits the consumer to remove cigarettes 300 without opening the top closure.

The combination of this feature with the above-described raised position greatly increases the ease in removing cigarettes 300. In particular, the consumer may push bottom wall 40 upward leaving the top closure in the closed position, as shown in FIG. 10, allowing access to the area around the corner where top 250 and left side 215 of the encased pack meet. The consumer thus may more easily grab one of cigarettes 300 and remove it from the reusable hard pack.

The preferred embodiment may optionally include means for closing the gap in top wall 50, such as shown by gap top wall 70 and gap tuck portion 80 in FIGS. 12-13. The blank in FIG. 12 is the same as the blank in FIG. 1 except for the inclusion of gap top wall 70 (which is pivotably attached to top wall 50) and gap tuck portion 80 (which is pivotably attached to gap top wall 70).

The blank shown in FIG. 12 is formed into the three-dimensional configuration using the same method as described above and as shown in FIGS. 2-8. FIG. 13 shows the additional step of inserting gap tuck portion 80 into the reuseable hard pack between the encased soft or foil pack and left side wall 15.

The consumer may then gain access to the cigarettes in two ways: by removing gap tuck portion 80 and pivoting back gap top wall 70 to expose the cigarettes through the resulting gap, or by removing tuck portion 60 and pivoting back top wall 50 to expose the entire encased soft or foil cigarette pack. When tuck portion 60 and top wall 50 are opened, gap top wall 70 remains coplanar with top wall 50, and gap tuck portion 80 is thereby removed from between the encased cigarettes and left side wall 15.

It will be apparent that minor modifications to the manner in which the reusable hard pack is fabricated, packaged for tax-stamping and later distribution to retailers, and formed by the consumer, may be made.

For example, the steps described as performed by the consumer may be done by the retailer, or earlier in the distribution chain. The reusable hard pack may be formed and a foil or soft pack inserted prior to tax-stamping by folding top wall 50 and tuck portion 60 along and abutted against the exterior surface of rear wall 30, then inserted into a standard ten-pack carton along with nine other foil or soft packs. Alternately, top wall 50 and tuck portion 60 may be folded along and abutted against the interior surface of rear wall 30, between rear wall 30 and rear 230 of the encased foil or soft pack. Either configuration would allow the encased foil or soft pack to be exposed and tax stamped by a standard tax-stamping machine. The foil or soft packs are preferably inserted into the reuseable hard pack upside down so that the bottom of the foil or soft pack receives the tax stamp.

While the preferred embodiment suggests placing the reusable hard pack in a standard ten-pack carton, non-standard cartons may also be used. For example, a detachable dual half-carton may be used, with the reusable hard pack being inserted into one or both half-carton sections. Or a carton may encase

eight or twelve cigarette packs instead of ten, or any other number of packs.

Alternately, the reusable hard pack may be designed so that the side wall and insert side wall are secured on the opposite side of the pack relative to the position of the top closure. This would be accomplished by folding the blank shown in FIG. 1 (or the blank shown in FIG. 12) in the opposite direction, that is, such that the surface of the panels shown become the interior surface of the pack instead of the exterior surface, as shown in the drawings and described above. Whereas in the preferred embodiment right side wall 25 and insert side wall 5 are positioned on the right side of the pack when facing front wall 10 with the top closure at the top of the pack, they would be positioned on the left side of the pack in the alternate embodiment when viewed with front wall 10 with the top closure at the top of the pack.

Similarly, the relative position of top wall 50 may be changed, such that the gap at the side of top wall 50 between tuck portion 60 and interior wall 20 (or gap top wall 70 and gap tuck portion 80) is on the opposite side. In this configuration, the lip or overhang of top wall 50 would extend over the adjacent free edge of left wall 15 instead of right wall 25.

As described herein and in the claims that follow, the phrase "foldably attached to" shall mean that the two walls or panels are made from contiguous portions of the blank, and scored or otherwise made foldably such that once folded into the final three-dimensional configuration, the angle between the two walls or panels, which is preferably 90°, need not be changed through the life of the reusable hard pack.

As described herein and in the claims that follow, the phrase "pivotably attached to" shall mean that the two walls of panels are made from contiguous portions of the same blank, and heavily scored or otherwise made pivotable such that the angle between the two walls or panels may and are expected to be repeatedly changed throughout the life of the reusable hard pack.

As described herein and in the claims that follow, the phrase "connected to" shall mean that the two walls or panels are either "foldably attached to" each other, as defined above, or are made from non-contiguous portions of the same blank and are secured to each other by any securing means well known in the art, such as by tape, sticker, or an extension tab or panel extending from one wall or panel and glued to the other wall or panel.

Claims

1. A reusable hard pack for encasing cigarettes comprising:

a front wall (10);

a first side wall (15) perpendicularly connected to the front wall;

a second side wall (25) perpendicularly connected to the front wall and opposite and parallel to the first side wall;

a rear wall (30) perpendicularly connected to each of the first and second side walls opposite and parallel to the front wall;

a bottom wall (40) pivotably attached to the front wall;

an interior wall (20) pivotably attached to the bottom wall opposite the front wall; and

a top wall (50) pivotably attached to the interior wall opposite the bottom wall;

wherein the interior wall (20) is movable along the interior surface of the rear wall (30) when the bottom wall (40) is pivoted toward the top wall (50) such that the angle between the bottom wall (40) and the front wall (10) is less than 90°, and the portion of the interior wall (20) adjacent to the top wall (50) extends across and beyond the adjacent free edge of the rear wall (30); and

wherein the top wall (50) is capable of a closed position in which it is perpendicular to each of the front (10), rear (30), and side (15,25) walls, and in which the top wall (50) further comprises at least one overhang portion that extends across and beyond the least one of the planes defined by the first side wall, the second side wall and the rear wall.

2. A reusable hard pack according to claim 1 of paperboard.

3. A reusable hard pack according to claim 1 or 2 further comprising a tuck portion (60) pivotably attached to the top wall (50) opposite the interior wall (20) such that when the top wall (50) is in the closed position, the tuck portion (60) may be inserted into the reusable hard pack parallel to and abutted against the front wall (10).

4. A reusable hard pack according to any preceding claim wherein the first side wall (15) is foldably attached to the front wall (10).

5. A reusable hard pack according to any preceding claim wherein the rear wall (30) is foldably attached to the first side wall (15) opposite the front wall (10).

6. A reusable hard pack according to any preceding claim wherein the second side wall (25) is foldably attached to the front wall (10) opposite the first side wall (15).

7. A reusable hard pack according to any preceding

claim further comprising an insert side wall (5) foldably attached to the rear wall (30) opposite the first side wall (15) and secured to the second side wall (25).

8. A reusable hard pack according to claim 7 wherein the insert side wall (5) is secured to the second side wall (25) by glue (100).

9. A reusable hard pack according to any preceding claim wherein when the top wall (50) is in the closed position it extends from one side wall (25) partially toward the other side wall (15) leaving a gap between the top wall and the said other side wall (15).

10. A reusable hard pack according to claim 9 wherein the length of the gap of parallel to the front wall (10), is greater than one-quarter and less than five-twelfths of the shortest distance between the first (15) and second side walls (25).

11. A reusable hard pack according to claim 9 or 10 further comprising a gap top wall (70) pivotably attached to the top wall (50) along the edge of the top wall remote from the second side walls (15,25).

12. A reusable hard pack according to claim 11 further comprising a gap tuck portion (80) pivotably attached to the gap top wall (70) opposite the top wall (50).

13. A reusable hard pack according to any preceding claim wherein the length of the shortest dimension across the overhang portion is greater than 0.8mm (1/32 inch) and less than 2.4mm (3/32 inch).

14. A blank for forming a reusable hard pack according to any preceding claim comprising:

a front wall (10) panel;

a right side wall (25) panel foldably attached to the front wall panel;

a left side wall (15) panel foldably attached to the front wall panel opposite, and substantially the same size and shape as, the right side wall (25) panel;

a rear wall (30) panel foldably attached to the left side wall (15) panel opposite, and substantially the same size and shape as, the front wall (10) panel;

a bottom wall (40) panel pivotably attached to the front wall (10) panel;

an interior wall (20) panel pivotably attached to the bottom wall (40) panel opposite the front wall (10) panel;

a top wall (50) panel pivotably attached to the interior wall (20) panel opposite the bottom wall (40) panel; and

a tuck portion (60) panel pivotably attached to the top wall (50) panel opposite the interior wall (20) panel;

wherein the blank is capable of being folded into a three-dimensional configuration such that:

the right side wall (25) panel is secured to and perpendicular to the front wall (10) panel and rear wall (30) panel;

the left side wall (15) is perpendicular to the front wall (10) panel and rear wall (30) panel;

the bottom wall (40) panel is perpendicular to the front wall (10) panel, the rear wall (30) panel, the right side wall (25) panel, the left side wall (15) panel and the interior wall (20) panel;

the interior wall (20) panel is parallel to and abutted against the rear wall (30) panel;

the top wall (50) panel is perpendicular to the interior wall (20) panel and extends across and beyond the adjacent free edge of one side wall (25) panel; and

the tuck portion (60) panel is perpendicular to the top wall (50) panel and parallel to and abutted against the interior surface of the front wall (10) panel.

15. A blank according to claim 14 of paperboard.

16. A blank according to claim 14 or 15 wherein, when the blank is formed into the three-dimensional configuration, the top wall (50) panel extends across and beyond the adjacent free edge of the one side wall (25) panel by more than 0.8mm (1/32 inch) and less than 2.4mm (3/32 inch).

17. A blank according to claim 14, 15 or 16 wherein, when the blank is formed into the three-dimensional configuration, the distance across the top wall (50) panel from its edge which extends across and beyond the free edge of the adjacent side wall (25) panel to the opposite edge of the top wall panel is less than the shortest distance between the side wall (15,25) panels leaving a gap between the top wall (50) and the other side wall (15).

18. A blank according to claim 17 wherein, when the blank is formed into the three-dimensional configuration, the distance across the top wall (50) panel from its edge which extends across and beyond the free edge of the adjacent side wall (25) panel to the opposite edge of the top wall (50) panel is greater than seven-twelfths (7/12) and less than three-fourths (3/4) of the shortest distance between the side wall (15,25) panels.

19. A blank according to claim 17 or 18 further comprising a gap top wall (70) panel pivotably attached to the top wall (50) panel.

20. A blank according to claim 19 further comprising a gap tuck portion (80) panel pivotably attached to the gap top wall (70) panel opposite the top wall (50) panel.

21. A blank according to any of claims 14 to 20 further comprising an insert side wall (5) panel foldably attached to the rear wall (30) panel opposite the left side wall (15) panel such that the insert side wall (5) panel can be secured to the right side wall (15) panel.

22. A collapsed, reusable hard pack according to any of claims 1 to 3 for encasing cigarettes and configured to be inserted in a cigarette carton without obstructing the tax-stamping process, comprising a first, second and third layer;

wherein the first layer comprises:

a front wall (10); and

a second side wall (15) foldably attached to and coplanar with the front wall;

wherein the second layer comprises:

a bottom wall (40) pivotably attached to and abutted against the front wall (10);

an interior wall (20) pivotably attached to the bottom wall (20) opposite the bottom wall (40), and coplanar with the interior wall (20); and

wherein the third layer comprises:

a first side wall (15) foldably attached to the front wall (10) opposite the second side wall (15), and abutted against the surface of the interior wall (20) opposite the front wall (10); and

a rear wall (30) foldably attached to the first side wall (15) opposite the front wall (10), coplanar with the first side wall (15), and foldably connected to the second side wall (25);

wherein the shortest distance across the first layer and the shortest distance across the third layer are each less than the length of a line along which the front wall (10) and the first side wall (15) are pivotably attached;

wherein the collapsed, reusable hard pack is capable of being folded into a three-dimensional configuration in which:

the front (10) and rear (30) walls are each perpendicular to each of the first (15) and second (25) side walls;

the bottom wall (40) is perpendicular to each of the front (10), rear (30), first (15) side and second (25) side walls;

the interior wall (20) is perpendicular to the bottom wall (40) and parallel to and abutted against the rear wall (30); and

the top wall (50) is capable of being in a closed position in which the top wall is pivoted so that it is perpendicular to each of the interior (20), front (10), rear (30), first (15) and second (25) side walls, and extends across and beyond at least one of the planes defined by the side walls.

23. A collapsed, reusable hard pack according to claim 22 of paperboard.

24. A collapsed, reusable hard pack according to claim 22 or 23 wherein, when the top wall is in the closed position, the top wall extends across and beyond one of the planes defined by the side walls (15,25) by a distance of greater than 0.8mm (1/32 inch) and less than 2.4mm (3/32 inch).

25. A collapsed, reusable hard pack according to any of claims 22 to 24 wherein, when the top wall (50) in the closed position, the length of a line across the top wall parallel to the front wall (10) is less than the shortest distance between the side walls (15,25) to define a gap between the top wall (50) and a side wall (15).

26. A collapsed, reusable hard pack according to claim 25 wherein, when the top wall (50) is in the closed position, the length of the line across the top wall parallel to the front wall (10) is greater than sevent-twelfths (7/12) and less than three-fourths (3/4) of the shortest distance between the side walls (15,25).

27. A collapsed, reusable hard pack according to claim 25 or 26 further comprising a gap top wall (70) pivotably attached to the top wall (50) opposite the edge of the top wall that extends across and beyond one of the planes defined by the first and second side walls when the top wall is in the closed position.

28. A collapsed, reusable hard pack according to claim 27 further comprising a gap tuck portion (80) pivotably attached to the gap top wall (70) opposite the top wall (50).

29. A collapsed, reusable hard pack according to any of claims 22 to 28 wherein the second layer further comprises an insert side wall (5) foldably attached to the rear wall (30) opposite the first side wall (15), folded parallel to and abutted against the rear wall, and parallel to, abutted against and secured to the second side wall (25).

30. A collapsed, reusable hard pack according to claim 29 wherein the insert side wall (5) is secured to the second side wall (25) by glue (100).

31. A method for packaging soft packs of cigarettes in a reusable hard pack comprising:

preparing a blank having:

a front wall (10) panel;

a first side wall (15) panel foldably attached to the front wall (10) panel;

a second side wall (25) panel foldably attached to the front wall (10) panel opposite and substantially the same size and shape as the first side wall (15) panel;

a rear wall (30) panel foldably attached to the first side wall (15) panel opposite, and substantially the same size and shape as, the front wall (10) panel;

an insert side wall (5) panel foldably attached to the rear wall (30) panel opposite the first side wall (15) panel;

a bottom wall (40) panel pivotably attached to the front wall (10) panel;

an interior wall (20) panel pivotably attached to the bottom wall (40) panel opposite the front wall (10) panel; and

a top wall (50) panel pivotably attached to the interior wall (20) panel opposite the bottom wall (40) panel;

folding the bottom wall (40) panel along the line along which the bottom wall panel is pivotably attached to the front wall (10) panel so that the bottom wall panel is parallel to and abutted against the front wall panel, and the bottom (40), interior (20) and top wall (50) panels remain in plane with each other;

folding the insert side wall (5) panel along a line along which the insert side wall panel is foldably attached to the rear wall (30) panel so that the insert side wall panel is parallel to and abutted against the rear wall panel; and

folding the first side wall (15) panel along a line along which the first side wall panel is foldably attached to the front wall (10) panel so that the first side wall panel is parallel to and abutted against the bottom wall (40) panel and the interior wall (20) panel, the first side wall (15) panel and rear wall (30) panel are coplanar, and the insert side wall (5) panel is parallel to, abutted against and secured to the second side wall (25) panel.

32. A method according to claim 31 wherein further comprising inserting the collapsed, reusable hard pack into a carton with cigarette packs so that the cigarette packs may be tax stamped using a standard tax-stamping machine.

33. A method according to claim 31 or 32 wherein in the step of folding the first side wall (15) panel the insert side wall (5) panel is glued to the second side wall (25) panel.

34. A method according to claim 33 wherein in the step of folding the first side wall (15) panel the glue is applied to the insert side wall (5) panel prior to folding the first side wall (15) panel along the line along which the first side wall panel is foldably attached to the front wall (10) panel and securing the insert side wall (5) panel to the second side wall (25) panel.

35. A method according to claim 33 or 34 wherein in the step of folding the first side wall (15) panel the glue is applied to the second side wall (25) panel prior to folding the first side wall panel is foldably attached to the front wall (10) panel and securing the insert side wall (5) panel to the second side wall (25) panel.

36. A method according to any of claims 31 to 35 wherein the blank prepared in the step of preparing a blank further comprises a tuck portion (60) panel pivotably attached to the top wall (50) panel opposite the interior wall (20) panel, and wherein the tuck portion panel is coplanar with the top wall panel during the three folding steps.

37. A method according to any of claims 31 to 36 wherein the blank prepared in the step of preparing a blank further comprises a gap top wall (70) panel pivotably attached to the top wall (50) panel along a line perpendicular to the line at which the top wall (50) panel is pivotably attached to the interior wall (20) panel.

FIG. 1

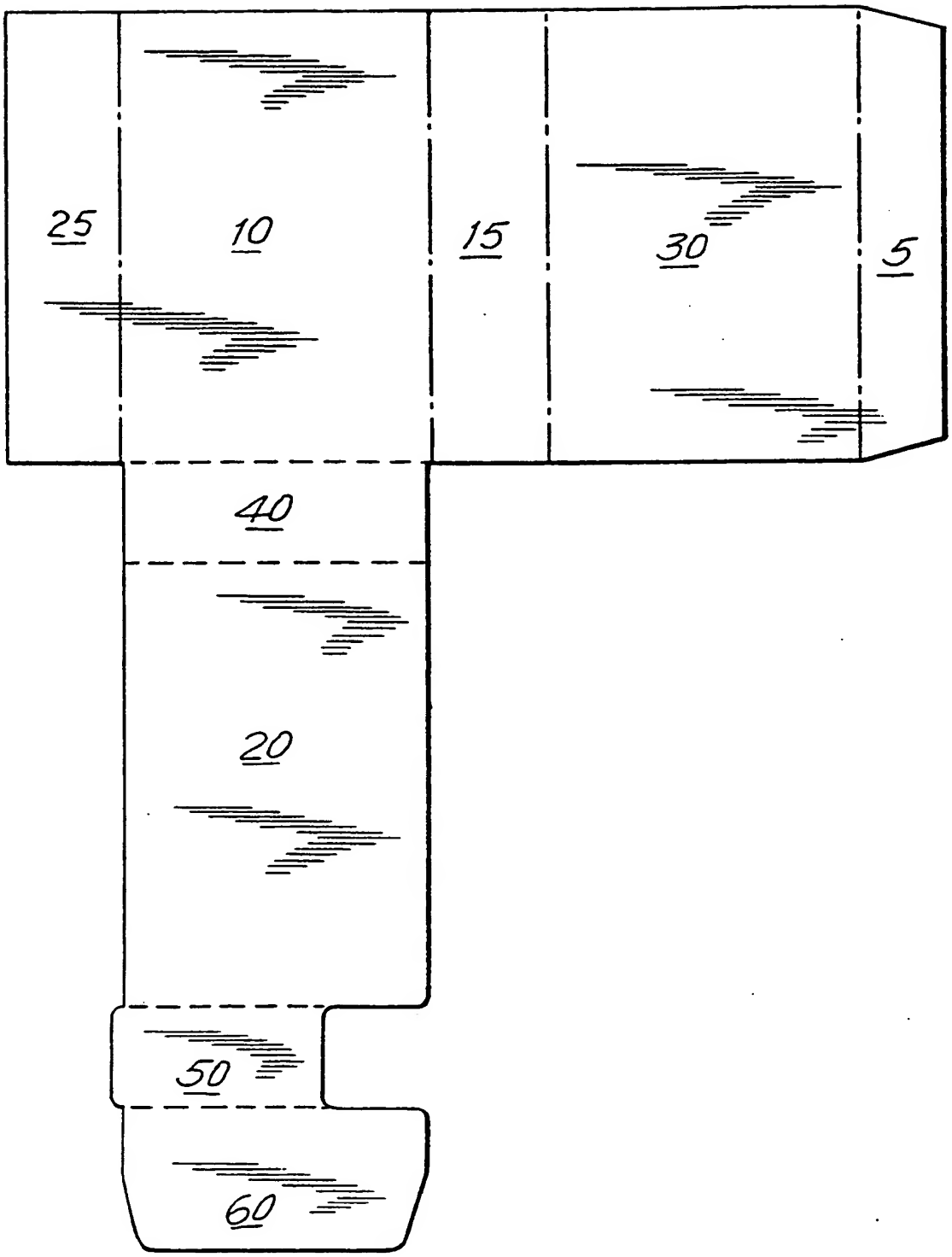
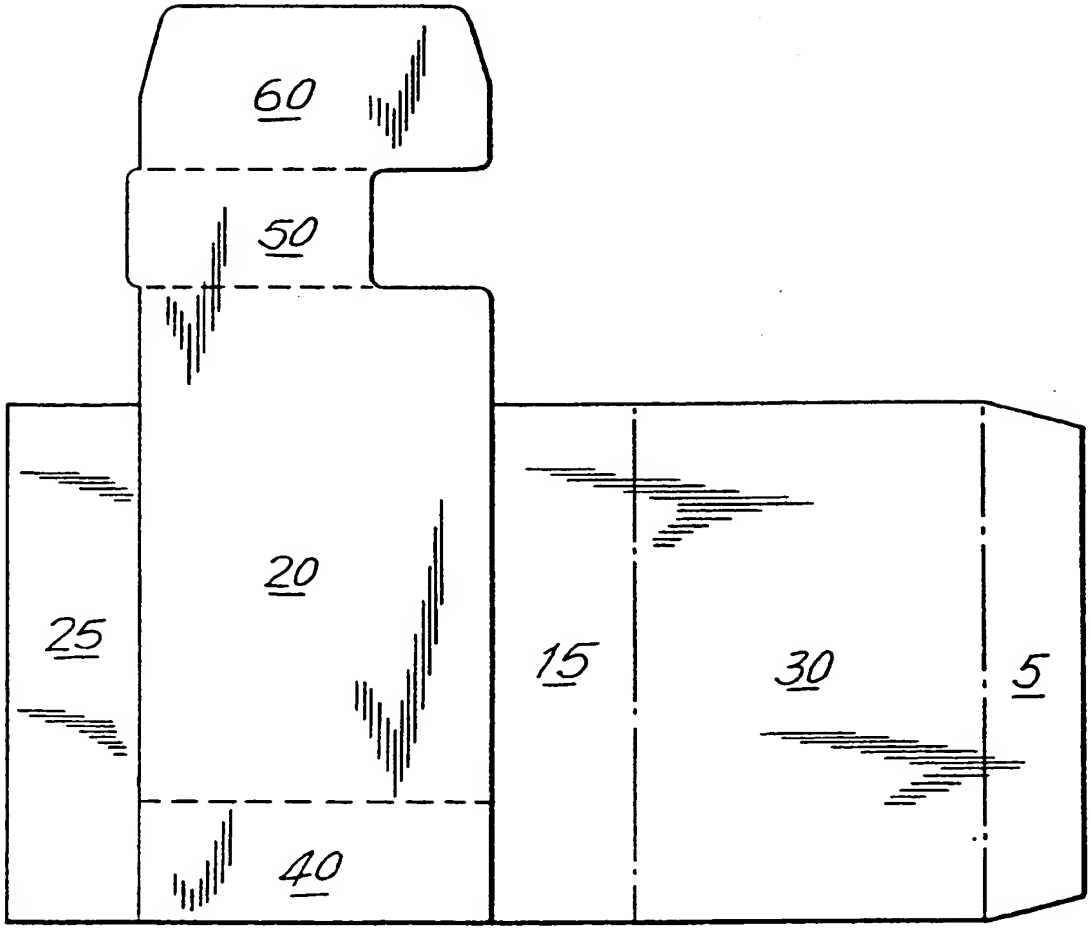


FIG. 2



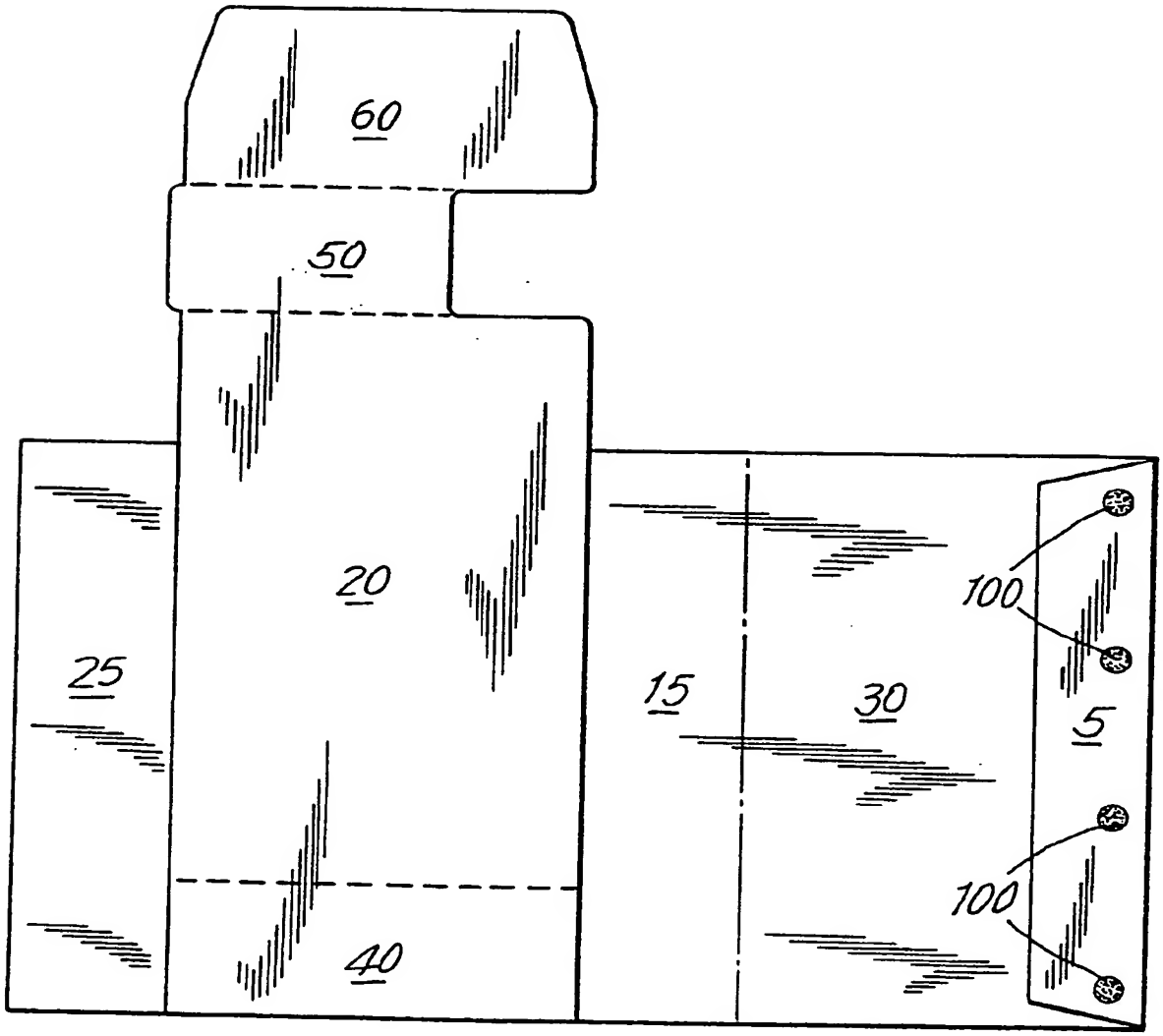


FIG. 3

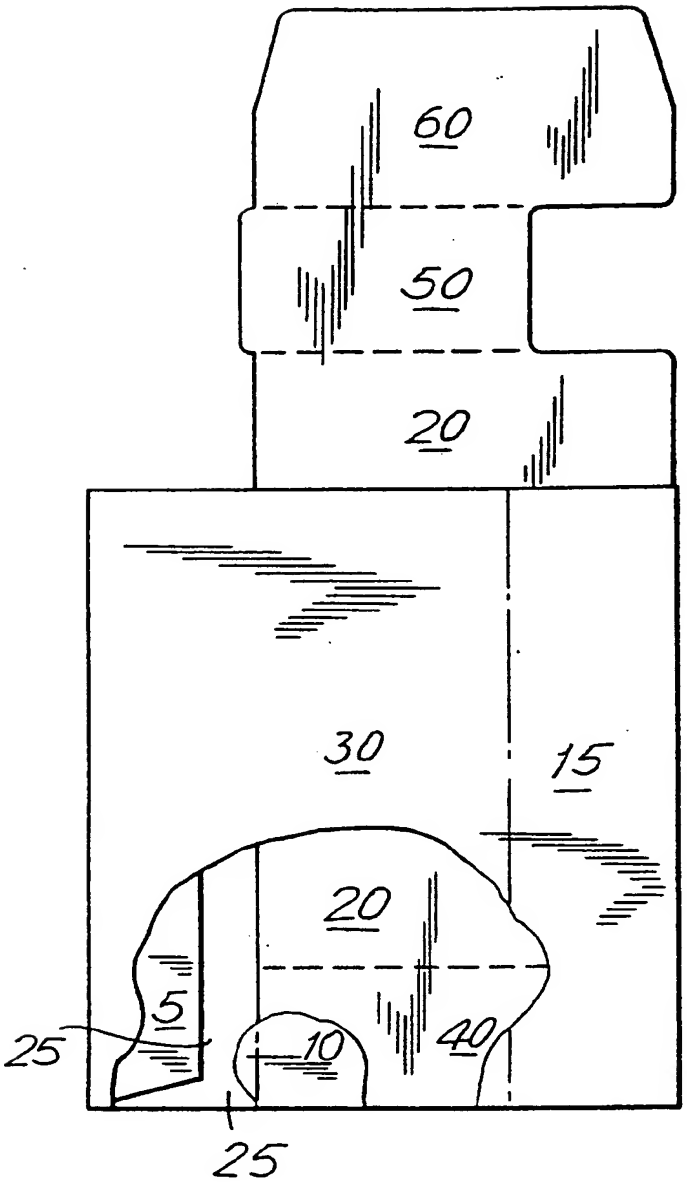


FIG. 4

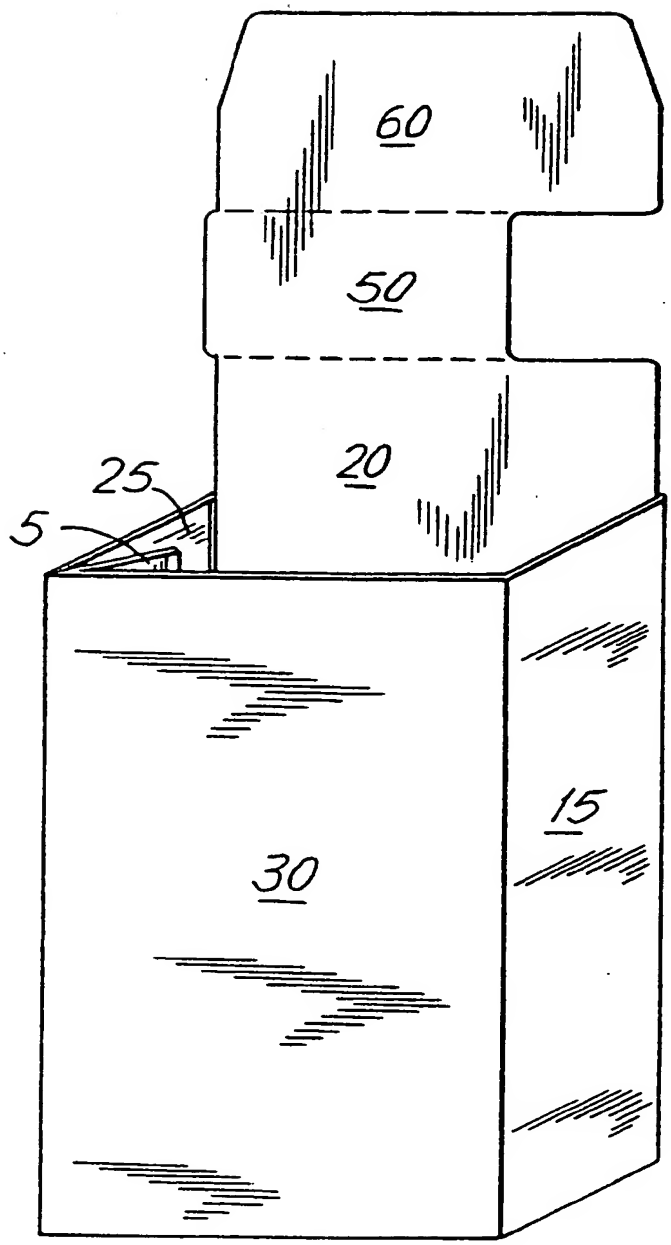
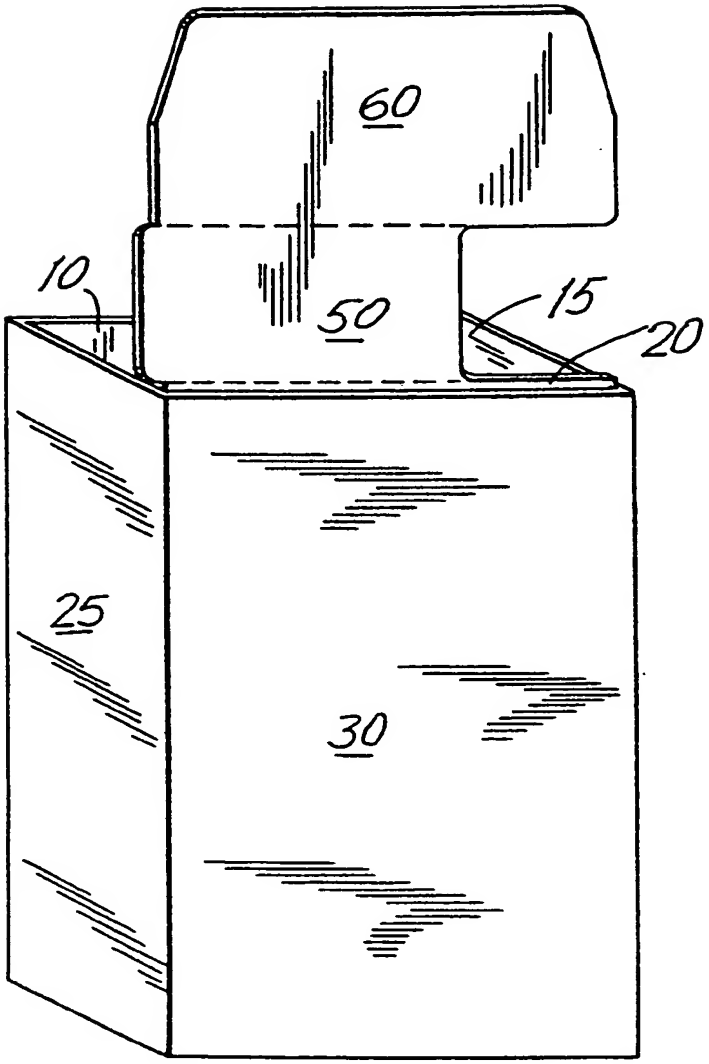


FIG. 5

FIG. 6



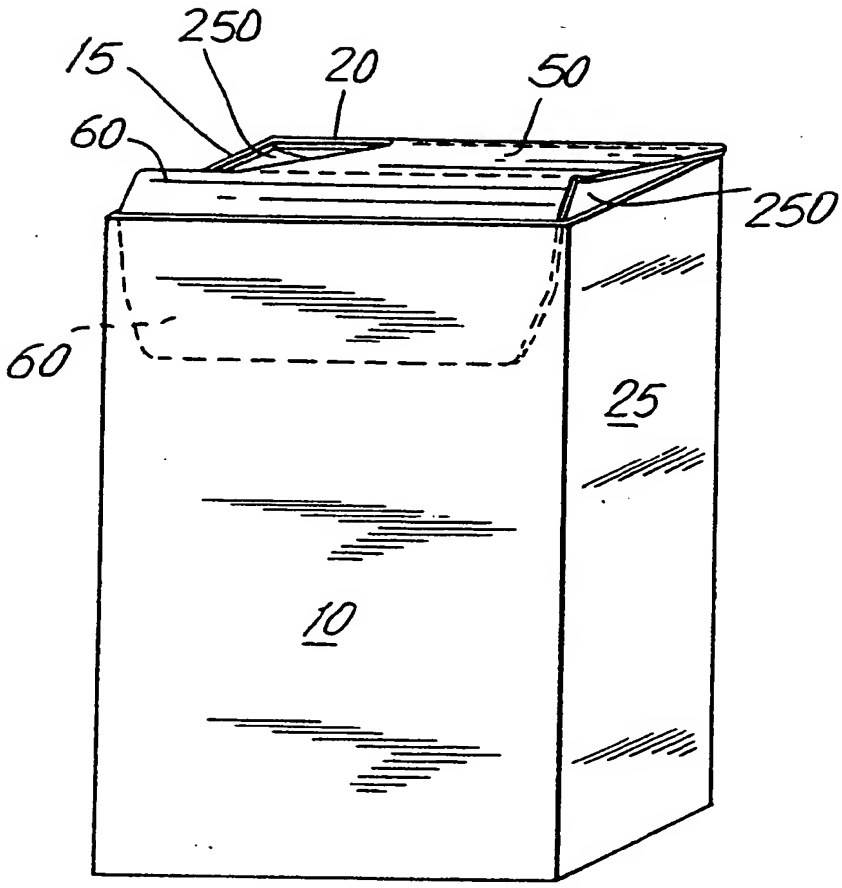


FIG. 7

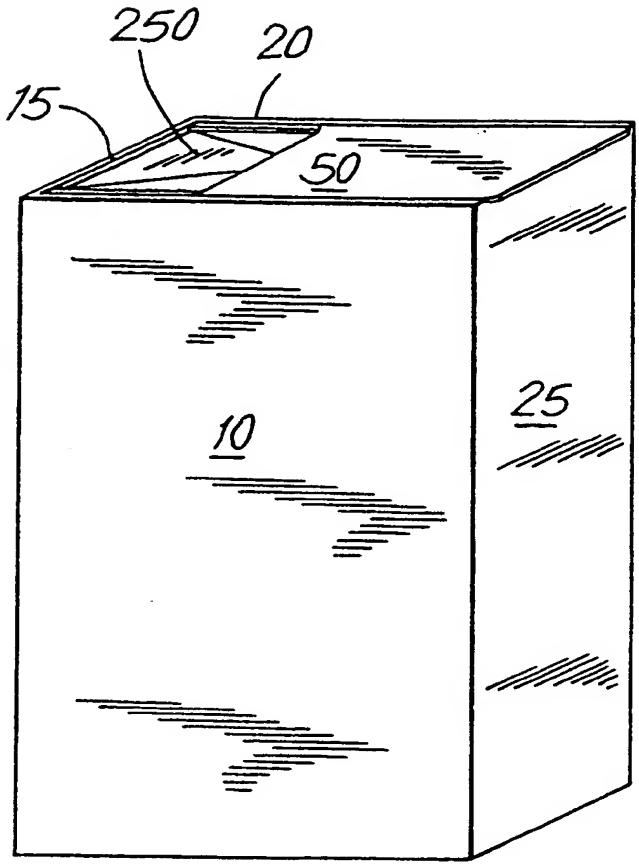


FIG.8

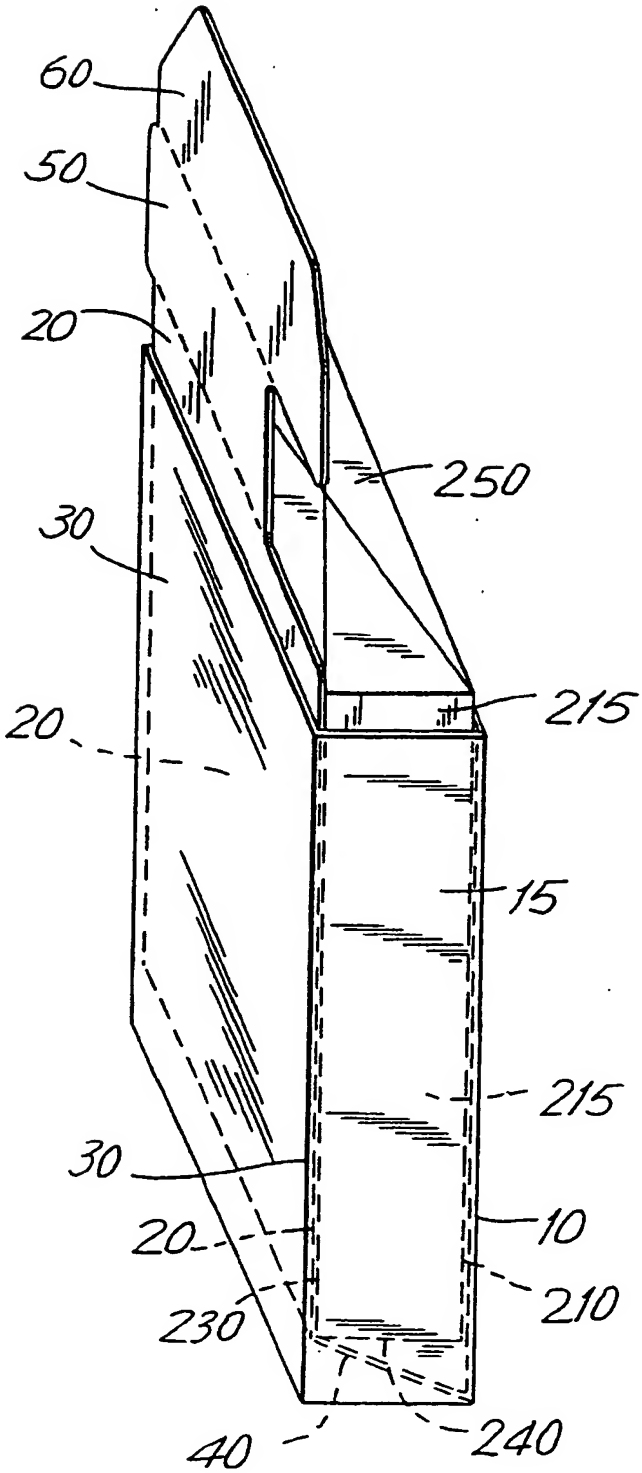


FIG. 9

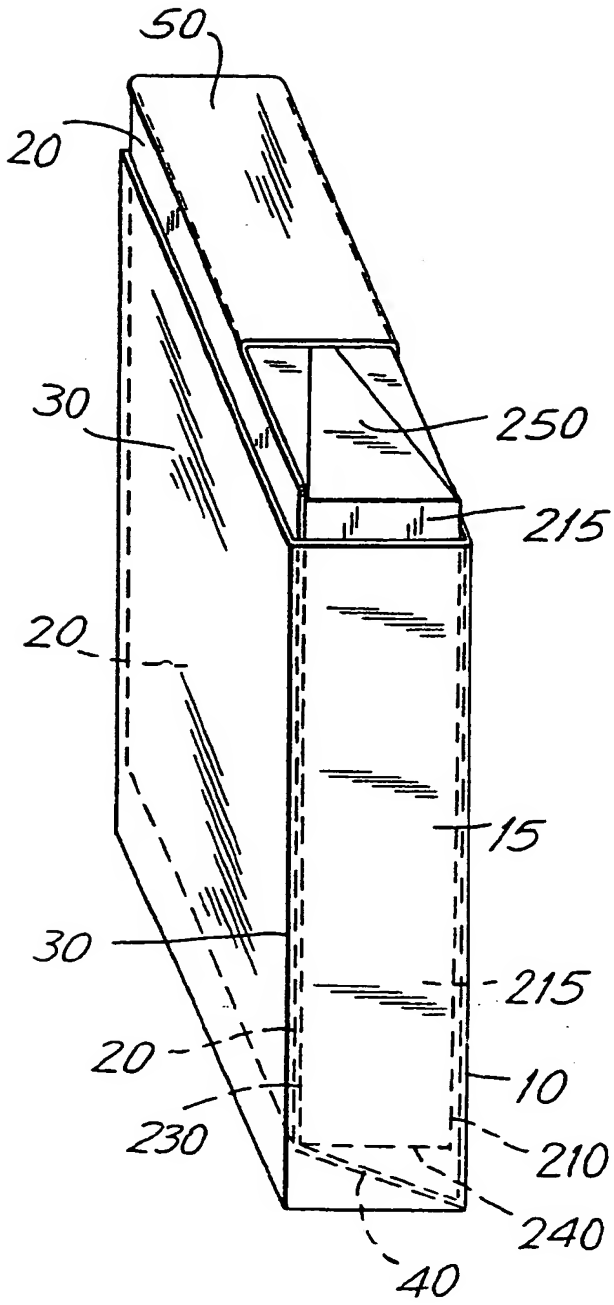
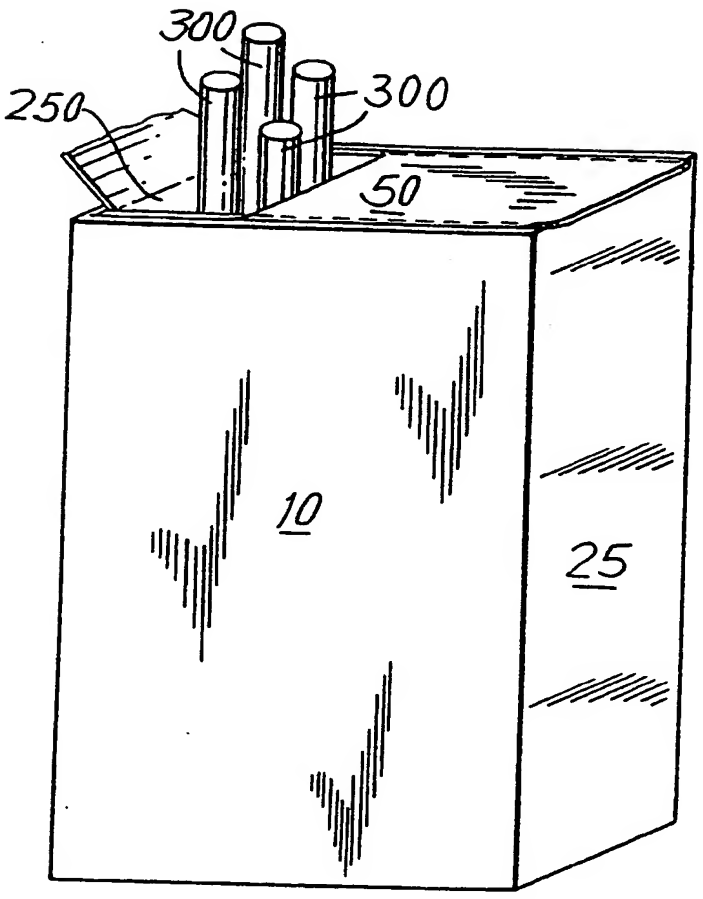


FIG. 10

FIG. 11



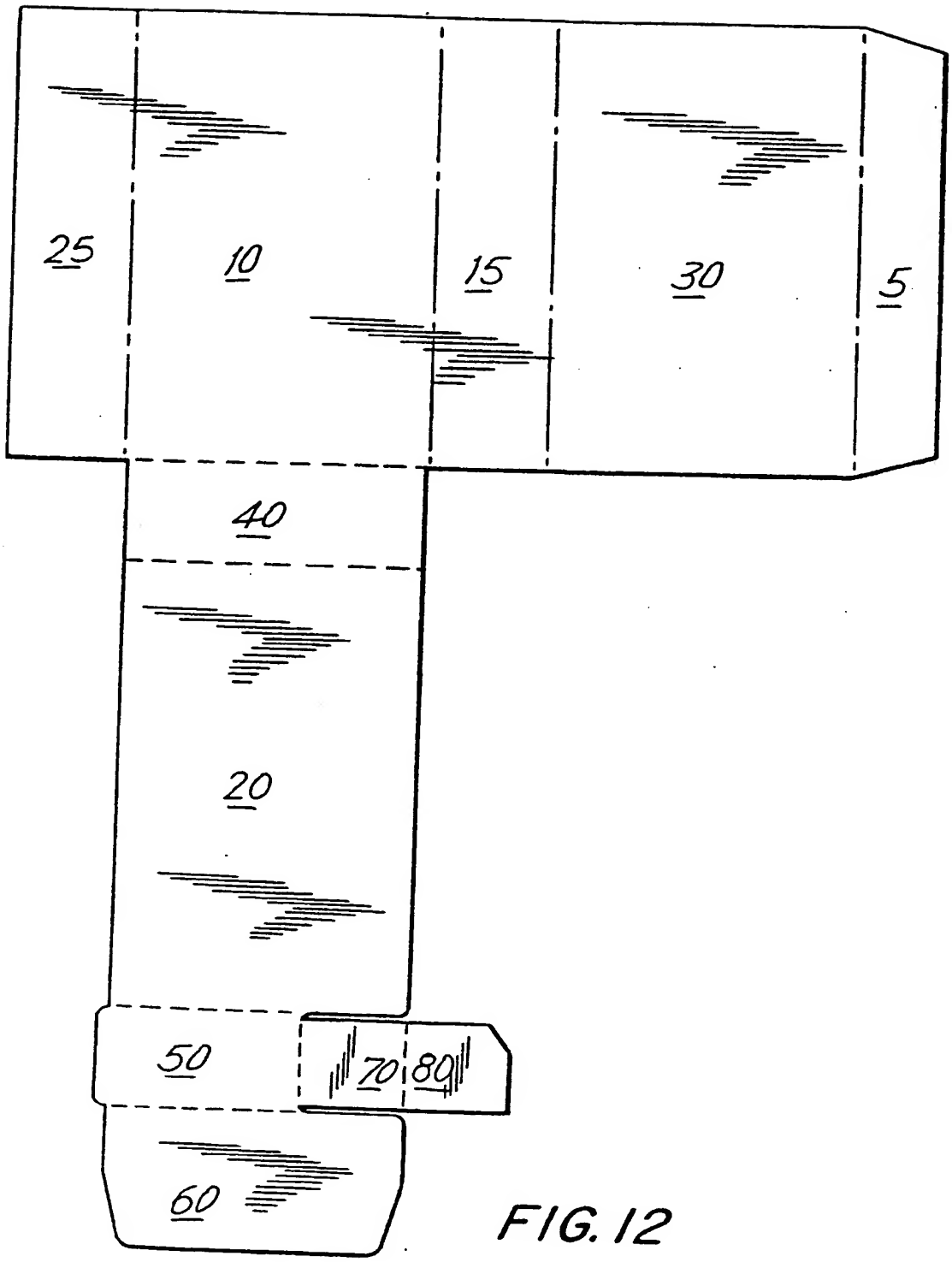
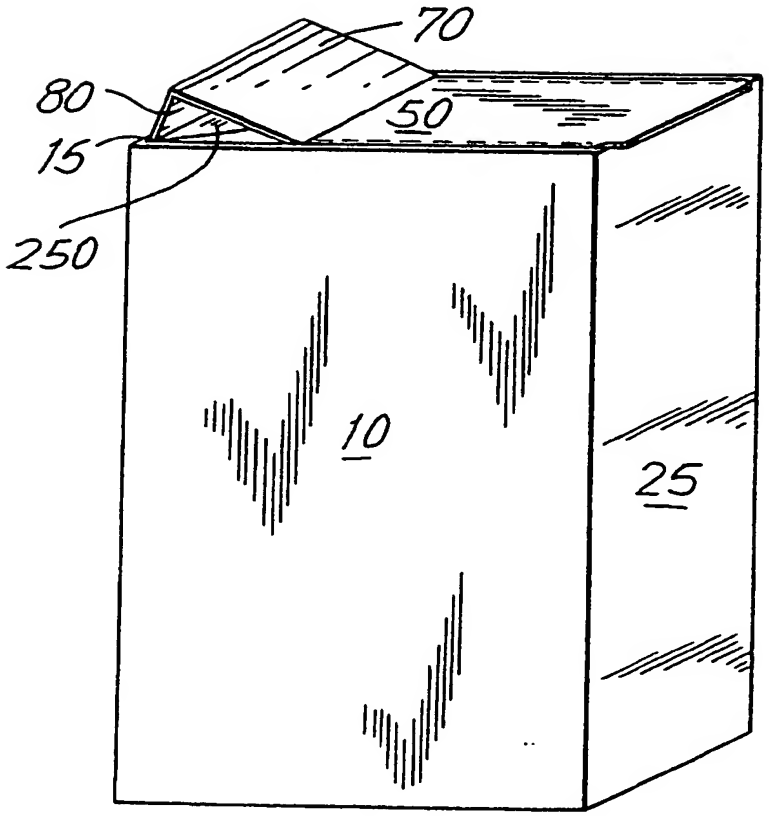


FIG. 12

FIG. 13



European Patent Office

EUROPEAN SEARCH REPORT

Application Number EP 93306238.2

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
Y	US - A - 2 818 969 (KLEIN) * Especially column 1, lines 17-21 *	1-13, 22-30, 31-37	B 65 D 85/10 A 24 F 15/12
X	US - A - 2 279 614 (BRYANT) * Totality *	1-13, 14-21, 22-30, 31-37	
Y	US - A - 1 533 413 (HEYGEL) * Totality *	1-13, 22-30, 31-37	
A	GB - A - 722 101 (SHOESMITH) * Totality *	1,31	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)

A 24 F 15/00
B 65 D 85/00

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
VIENNA	18-11-1993	MELZER

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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D : document cited in the application
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